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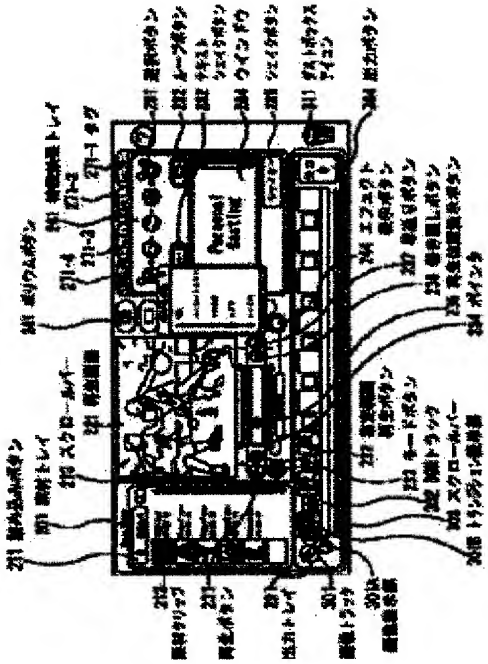
(54) DEVICE AND METHOD FOR PROCESSING INFORMATION AND PROGRAM STORAGE MEDIUM

(57)Abstract:
PROBLEM TO BE SOLVED: To easily and quickly edit images.
SOLUTION: When a read button 211 is operated, a material clip 212 as an editing object is displayed at a material tray 201. When a tag 271-1 is selected, a shaker window provided with selection buttons 281 is displayed. The respective plural selection buttons 281 correspond to scenarios. To the respective scenarios, the number of scenes and effects to be imparted to the respective scenes, etc., are specified beforehand. A user selects one scenario by selecting one selection button 281. When a shake button 285 is operated, the prescribed one is randomly selected from the material clips 212 specified beforehand by the user and allocated to the respective scenes of the scenario selected by the user.



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CLAIMS

[Claim(s)]
[Claim 1]An information processor provided with scenario information which comprises two or more scenes, and a matching means to make two or more pictures which are editing objects correspond to two or more above-mentioned scenes of each arbitrarily, respectively.
[Claim 2]The information processor according to claim 1, wherein two or more above-mentioned scenes are predetermined length different, respectively.
[Claim 3]The information processor according to claim 1 having further a correcting means which corrects a described image matched by the above-mentioned matching means according to the length of the above-mentioned scene.
[Claim 4]The information processor according to claim 3 having further a reproduction means which reproduces continuously two or more described images matched by the above-mentioned matching means based on the above-mentioned scenario information.
[Claim 5]The information processor according to claim 4 reproducing the above-mentioned reproduction means with the application of the above-mentioned special-effects information to two or more described images based on predetermined special-effects information matched with the above-mentioned scene.
[Claim 6]Have further a determination means to determine arbitrarily special-effects information matched out of two or more special-effects information to the above-mentioned scene, and the above-mentioned reproduction means, The information processor according to claim 4 characterized by reproducing with the application of the above-mentioned special-effects information to two or more described images based on decision results of the above-mentioned determination means.
[Claim 7]The information processor according to claim 1, wherein the above-mentioned matching means matches arbitrarily two or more described images which are editing objects to two or more above-mentioned scenes of scenario information selected from two or more scenario information.
[Claim 8]A registration means to register a picture used as an editing object, and an image information display means which carries out the list display of the information about two or more described images which are editing objects, The information processor according to claim 1 having further a print-out displaying means which displays information about two or more described images matched by the above-mentioned matching means side by side according to turn of two or more above-mentioned scenes.
[Claim 9]The information processor according to claim 7, wherein the above-mentioned matching means matches using a scenario corresponding to instructions from a user among the 1st scenario on condition of repetition continuous reproduction, and the 2nd scenario on condition of repetition reproduction.
[Claim 10]An information processing method comprising:
A matching processing step which matches arbitrarily two or more pictures which are editing objects to each of two or more scenes which constitute scenario information.
a correction processing step which matches and corrects the described images of each carried out

according to the length of each above-mentioned scene.
A regeneration step which reproduces two or more described images continuously based on the above-mentioned scenario information.

[Claim 11]The information processing method according to claim 10 by which a decision processing step which determines arbitrarily special-effects information matched out of two or more special-effects information to the above-mentioned scene being included further.
[Claim 12]An image information display processing step which carries out the list display of the information about two or more described images which are editing objects, The information processing method according to claim 10 by which a print-out display-processing step which displays information about two or more described images matched at the above-mentioned matching processing step side by side being further included according to turn of two or more above-mentioned scenes.
[Claim 13]A matching processing step which matches arbitrarily two or more pictures which are editing objects to each of two or more scenes which constitute scenario information, according to the length of each above-mentioned scene with a correction processing step which matches and corrects the described images of each carried out. A program storing medium with which a program which a computer by which a regeneration step which reproduces two or more described images continuously being included based on the above-mentioned scenario information can read is stored.
[Claim 14]A program storing medium with which a program which the computer according to claim 13 by which a decision processing step which determines arbitrarily special-effects information matched out of two or more special-effects information to the above-mentioned scene being included further can read is stored.
[Claim 15]An image information display processing step which carries out the list display of the information about two or more described images which are editing objects, According to turn of two or more above-mentioned scenes, A program storing medium with which a program which the computer according to claim 13 by which a print-out display-processing step which displays information about two or more described images matched at the above-mentioned matching processing step side by side being included further can read is stored.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention]This invention relates to the information processor and method of having enabled it to edit a picture simply especially, and a program storing medium about an information processor, a method, and a program storing medium.
[0002]
[Description of the Prior Art]These days, the function of a personal computer can improve and not only text data but image data can be edited now.
[0003]
[Problem(s) to be Solved by the Invention]However, in order to have edited the picture, even if the user had to learn the operating function and it learned it, SUBJECT which requires time for obtaining a predetermined edit result occurred.
[0004]This invention is made in view of such a situation, and enables it to edit a picture simply and promptly.
[0005]
[Means for Solving the Problem]This invention is characterized by an information processor comprising the following.
Scenario information which comprises two or more scenes.
A matching means to make two or more pictures which are editing objects correspond to two or more scenes of each arbitrarily, respectively.

[0006]Two or more above-mentioned scenes can be made into predetermined length different, respectively.
[0007]According to the length of the above-mentioned scene, a correcting means which corrects a picture matched by a matching means can be established further.
[0008]Based on the above-mentioned scenario information, a reproduction means which reproduces continuously two or more pictures matched by a matching means can be established further.
[0009]The above-mentioned reproduction means can be reproduced with the application of special-effects information in two or more pictures based on predetermined special-effects information matched with a scene.
[0010]It has further a determination means to determine arbitrarily special-effects information matched out of two or more special-effects information to the above-mentioned scene, and a reproduction means can be reproduced with the application of special-effects information in two or more pictures based on decision results of a determination means.
[0011]The above-mentioned matching means can match arbitrarily two or more pictures which are editing objects to two or more scenes of scenario information selected from two or more scenario information.

[0012]A registration means to register a picture used as an editing object, and an image information display means which carries out the list display of the information about two or more pictures which are editing objects, According to turn of two or more scenes, a print-out displaying means which displays information about two or more pictures matched by a matching means side by side can be established further.
[0013]The above-mentioned matching means can match using a scenario corresponding to instructions from a user among the 1st scenario on condition of repetition continuous reproduction, and the 2nd scenario on condition of repetition reproduction.
[0014]This invention is characterized by an information processing method comprising the following.
A matching processing step which matches arbitrarily two or more pictures which are editing objects to each of two or more scenes which constitute scenario information.
a correction processing step which matches and corrects the pictures of each carried out according to the length of each scene.
A regeneration step which reproduces two or more pictures continuously based on scenario information.

[0015]A decision processing step which determines arbitrarily special-effects information matched out of two or more special-effects information to the above-mentioned scene can be included further.
[0016]An image information display processing step which carries out the list display of the information about two or more pictures which are editing objects, and a print-out display-processing step which displays information about two or more pictures matched at a matching processing step side by side according to turn of two or more scenes can be included further.
[0017]This invention is characterized by a program of a storing medium comprising the following.
A matching processing step which matches arbitrarily two or more pictures which are editing objects to each of two or more scenes which constitute scenario information.
a correction processing step which matches and corrects the pictures of each carried out according to the length of each scene.
A regeneration step which reproduces two or more pictures continuously based on scenario information.

[0018]A decision processing step which determines arbitrarily special-effects information matched out of two or more special-effects information to the above-mentioned scene can be included further.
[0019]An image information display processing step which carries out the list display of the information about two or more pictures which are editing objects, and a print-out display-processing step which displays information about two or more pictures matched at a matching processing step side by side according to turn of two or more scenes can be included further.
[0020]Picture information is matched with an acquired scene in an information processor of this invention, a method, and a program.
[0021]
[Embodiment of the Invention]Hereafter, the 1 embodiment of the information processor concerning this invention is described with reference to Drawings.
[0022]Drawing 1 thru/or drawing 6 express the example of composition of the portable personal computer which applied this invention. This personal computer 1 is used as a mininote type personal computer, and is fundamentally constituted by the indicator 3 whose opening and closing are enabled to the main part 2 and the main part 2. The appearance perspective view and drawing 2 in which the state where drawing 1 opened the indicator 3 of the personal computer 1 to the main part 2 is shown, The front view and drawing 6 of the right side figure and drawing 5 in which the state where the left side face figure and drawing 4 in which the state where the top view and drawing 3

blockaded the indicator 3 to the main part 2 is shown opened the indicator 3 180 degrees to the main part 2 is shown are the bottom view.
[0023]The stick type pointing device 5 operated when moving the keyboard 4 operated when inputting various kinds of characters, signs, etc., and a mouse cursor to the main part 2 is formed in the upper surface. The shutter button 10 operated when picturizing with the loudspeaker 8-1 which outputs a sound and 8-2, and the CCD video camera 23 provided in the indicator 3 is further formed in the upper surface of the main part 2.
[0024]The indicator 3 is combined with the main part 2 by the hinge 9-1 and 9-2, enabling free opening and closing. It is equipped with the battery 7 between the hinge 9-1 of the main part 2, and the hinge 9-2, enabling free attachment and detachment.
[0025]As the pawl 13-1 and 13-2 are provided in the indicator 3 and it is shown in drawing 3, In the state where the indicator 3 was blockaded to the main part 2, the pore 6-1 into which the pawl 13-1 and each of 13-2 fit, and 6-2 are provided in the main part 2 in the position which counters the pawl 13-1 and 13-2 (drawing 2).
[0026]The microphone 24 is attached next to the image pick-up part 22. This microphone 24 is made as [collect / the sound from the back], as shown also in drawing 6.
[0027]As shown in drawing 3, the exhaust hole 11 is formed in the left lateral of the main part 2, and as shown in drawing 5, the suction hole 14 is formed in the front lower part of the main part 2 at it. The slot 12 for inserting the card (PC card) based on the standard which PCMCIA (Personal Computer Memory Card InternationalAssociation) specifies is established next to the exhaust hole 11.
[0028]LCD(Liquid Crystal Display) 21 which displays a picture is provided in the transverse plane of the indicator 3, and the image pick-up part 22 is formed in the upper bed part to the indicator 3, enabling free rotation. That is, this image pick-up part 22 is made as [rotate / it / in the arbitrary positions of the range of 180 degrees between the same direction as LCD21, and its reverse direction (the direction of on the back)]. The CCD video camera 23 is attached to the image pick-up part 22.
[0029]The lamp which consists of LED of power indicator PL, the cell lamp BL, the message lamp ML, and others is formed in the front-face side of the main part 2. The numerals 40 shown in drawing 1 are the electric power switches formed next to the shutter button 10, and the numerals 25 shown in drawing 5 are adjust rings which adjust the focus of the CCD video camera 23. The numerals 26 shown in drawing 6 are lids which cover the opening for attaching expansion memory in the main part 2.
[0030]Next, the composition inside the personal computer 1 is explained with reference to drawing 7.
[0031]The central processing unit (CPU (Central Processing Unit)) 51 comprises a Pentium (Pentium: trademark) processor made from Intel (Intel) (trade name), etc., and is connected to the host bus 52, for example. Further, the bridge 53 (what is called a north bridge) is connected to the host bus 52, and the bridge 53, It has AGP(Accelerated Graphics Port) 50 and is connected to the PCI (Peripheral ComponentInterconnect/Interface) bus 56.
[0032]The bridge 53 comprises 400BX etc. which are AGP Host Bridge Controller made from Intel, for example, and controls CPU51, RAM (Random-Access Memory)54 (what is called main memory), etc. The bridge 53 controls the video controller 57 via AGP50. What is called a chip set comprises this bridge 53 and bridge (what is called south bridge (PCI-ISA Bridge)) 58.
[0033]The bridge 53 is further connected also with the cache memory 55. The cache memory 55 comprises a memory which can perform operation of writing or read-out at a high speed more as compared with RAM, such as SRAM (Static RAM), 54, and carries out cash of the program or data which CPU51 uses (it memorizes temporarily).
[0034]CPU51 has-like (as compared with the cache memory 55, it is a memory which can operate at a high speed more, and CPU51 self controls) primary cache memory in the inside.

[0035]RAM54 comprises a DRAM (Dynamic RAM) and memorizes data required for the program which CPU51 executes, or operation of CPU51, for example. [when starting specifically completed RAM54, for example], The electronic mail program 54A, the auto pilot program 54B which were loaded from HDD67, Operating program (OS) Application program 54 F1 thru/or 54Fn of 54C, the shaker program 54D, the capture program 54E, and others are memorized.
[0036]The electronic mail program 54A is a program which delivers and receives correspondence (what is called an e-mail) via communication lines, such as the telephone line 76, via the modem 75. The electronic mail program 54A has a received mail acquisition function. Processing which will be acquired if this received mail acquisition function checks whether the mail addressed to a user has received a message and the mail addressed to a user is in that mail box 79 to the mail server 78 which Internet Service Provider 77 has is performed.
[0037]The auto pilot program 54B is a program which starts two or more processings (or program) which were set up beforehand one by one, and processes them in the order set up beforehand.
[0038]OS(Operating System)54C, For example, what is called Windows (Windows)95 (trademark) or Windows 98 (trademark) of Microsoft Corp. (trade name), Or it is a program which is represented by what is called MacOS (trademark) of Apple Computer (trade name), etc. and which controls fundamental operation of a computer.
[0039]The shaker program 54D is a program which performs automatic-formatting processing. The capture program 54E is a program which controls incorporation of the image pick by the CCD video camera 23.
[0040]The video controller 57 is connected to the bridge 53 via AGP50, and the data (image data or text data) supplied from CPU51 via AGP50 and the bridge 53 is received. The data which generated the image data corresponding to the received data, or was received is memorized as it is to the video memory (not shown) to build in. The video controller 57 displays on LCD21 of the indicator 3 the picture corresponding to the image data memorized by video memory. The video controller 57 supplies the video data supplied from the CCD video camera 23 to RAM54 via PCI bus 56.
[0041]The sound controller 64 is connected to PCI bus 56. The sound controller 64 incorporates the signal corresponding to a sound from the microphone 24, generates the data corresponding to a sound, and outputs it to RAM54. The sound controller 64 drives the loudspeaker 8 and makes a sound output to the loudspeaker 8.
[0042]The modem 75 is connected to PCI bus 56. The modem 75 receives predetermined data from the communication network 80 or the mail server 78 while transmitting predetermined data to the communication network 80 or the mail servers 78, such as the Internet, via the dial-up line 76 and Internet Service Provider 77.
[0043]The PC Card slot interface 111, It is connected to PCI bus 56, and while supplying the data supplied from the interface card 112 with which the slot 12 was equipped to CPU51 or RAM54, the data supplied from CPU51 is outputted to the interface card 112. The drive 113 is connected to PCI bus 56 via the PC Card slot interface 111 and the interface card 112.
[0044]The drive 113 reads the data currently recorded on the magnetic disk 121 with which it is equipped if needed, the optical disc 122, the magneto-optical disc 123, or the semiconductor memory 124, The read data is supplied to RAM54 via the interface card 112, the PC Card slot interface 111, and PCI bus 56.
[0045]The bridge 58 (what is called a south bridge) is also connected to PCI bus 56. The bridge 58 comprises PIIX4E made from Intel (trademark), etc., for example, An IDE (Integrated Drive Electronics) controller / configuration registers 59, the timer circuit 60, IDE interface 61, and the USB interface 68 grade are built in. The device by which the bridge 58 is connected to the IDE bus 62, Or control etc. of the device connected via the ISA/EIO (Industry Standard Architecture /Extended Input Output) bus 63 or the I/O interface 69, Various kinds of I/O (Input /Output) is controlled.
[0046]An IDE controller / configuration registers 59, It comprises so-called two IDE controllers of a

primary IDE controller and a secondary IDE controller, the configuration registers (configuration register), etc. (neither is illustrated).
[0047]HDD67 is connected to the primary IDE controller via the IDE bus 62. When other IDE buses are equipped with what is called IDE devices, such as a CD-ROM drive which is not illustrated or HDD, the IDE device with which it was equipped is electrically connected to a secondary IDE controller.
[0048]To HDD67, the electronic mail program 67A, the auto pilot program 67B, Two or more application program 67 F1 thru/or 67Fn, etc. of the shaker program 67D, the capture program 67E, and others are recorded as OS67C and an application program. The electronic mail program 67A, the auto pilot program 67B which are recorded on HDD67, OS67C, the shaker program 67D, the capture program 67E and application program 67 F1 thru/or 67Fn, etc. are the processes of starting (boot rise) processing, are supplied to RAM54 one by one, and are loaded to it.
[0049]From the GPS antenna 106 connected via USB port 107, USB interface 68 receives a pseudonoise code and transmits the received pseudonoise code to RAM54 via PCI bus 56.
[0050]The timer circuit 60 supplies to CPU51 the data in which current time is shown corresponding to the demand from various programs via PCI bus 56.
[0051]The I/O interface 69 is further connected to the ISA/EIO bus 63. This I/O interface 69 comprises an ene BEDITTO controller, and ROM70, RAM71, and CPU72 are mutually connected in that inside.
[0052]ROM70 has memorized beforehand the IEEE1394 interface program 70A, the LED control program 70B, the touchpad input monitoring program 70C, the keystroke monitoring program 70D, the Wake rise program 70E, etc.
[0053]The IEEE1394 interface program 70A is received while transmitting the data (data stored in the packet) based on the standard specified by IEEE1394 via the IEEE1394 port 101. The LED control program 70B controls lighting of the message lamp ML or the lamp which consists of other LED power indicator PL, the cell lamp BL, and if needed. The touchpad input monitoring program 70C is a program which supervises the input from the touchpad 33 corresponding to a user's operation.
[0054]The keystroke monitoring program 70D is a program which supervises the input from the keyboard 4 or other key switches. When it is checked for the Wake rise program 70E the time set up beforehand based on the data in which the current time supplied from the timer circuit 60 of the bridge 58 is shown and the set-up time comes, In order to start predetermined processing (or program) etc., it is a program which manages the power supply of each chip which constitutes the personal computer 1.
[0055]BIOS(Basic Input/Output System (basic input/output system))70G is further written in ROM70. BIOS70G controls delivery (input and output) of data between OS or an application program, and peripheral equipment (the touchpad 33, the keyboard 4, or HDD67 grade).
[0056]RAM71 has each register or an IEEE1394I/F register for LED control, a touchpad input status, keystroke status, or setting-out time, etc. as the registers 71A thru/or 71F. For example, when the electronic mail program 54A is started, a predetermined value is stored and, as for a LED control register, lighting of the message lamp ML is controlled corresponding to the value stored. As for a keystroke status register, a predetermined operation key flag is stored. Predetermined time is set up corresponding to operation of the keyboard 4 according [a setting-out time register] to a user etc.

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[Description of the Prior Art]These days, the function of a personal computer can improve and not only text data but image data can be edited now.
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[Problem(s) to be Solved by the Invention]However, in order to have edited the picture, even if the user had to learn the operating function and it learned it, SUBJECT which requires time for obtaining a predetermined edit result occurred.
[0004]This invention is made in view of such a situation, and enables it to edit a picture simply and promptly.
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[Means for Solving the Problem]This invention is characterized by an information processor comprising the following.
Scenario information which comprises two or more scenes.
A matching means to make two or more pictures which are editing objects correspond to two or more scenes of each arbitrarily, respectively.

[0006]Two or more above-mentioned scenes can be made into predetermined length different, respectively.
[0007]According to the length of the above-mentioned scene, a correcting means which corrects a picture matched by a matching means can be established further.
[0008]Based on the above-mentioned scenario information, a reproduction means which reproduces continuously two or more pictures matched by a matching means can be established further.
[0009]The above-mentioned reproduction means can be reproduced with the application of special-effects information in two or more pictures based on predetermined special-effects information matched with a scene.
[0010]It has further a determination means to determine arbitrarily special-effects information matched out of two or more special-effects information to the above-mentioned scene, and a reproduction means can be reproduced with the application of special-effects information in two or more pictures based on decision results of a determination means.
[0011]The above-mentioned matching means can match arbitrarily two or more pictures which are editing objects to two or more scenes of scenario information selected from two or more scenario information.

[0012]A registration means to register a picture used as an editing object, and an image information display means which carries out the list display of the information about two or more pictures which are editing objects, According to turn of two or more scenes, a print-out displaying means which displays information about two or more pictures matched by a matching means side by side can be established further.
[0013]The above-mentioned matching means can match using a scenario corresponding to instructions from a user among the 1st scenario on condition of repetition continuous reproduction, and the 2nd scenario on condition of repetition reproduction.
[0014]This invention is characterized by an information processing method comprising the following.
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[0015]A decision processing step which determines arbitrarily special-effects information matched out of two or more special-effects information to the above-mentioned scene can be included further.
[0016]An image information display processing step which carries out the list display of the information about two or more pictures which are editing objects, and a print-out display-processing step which displays information about two or more pictures matched at a matching processing step side by side according to turn of two or more scenes can be included further.
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[Embodiment of the Invention]Hereafter, the 1 embodiment of the information processor concerning this invention is described with reference to Drawings.
[0022]Drawing 1 thru/or drawing 6 express the example of composition of the portable personal computer which applied this invention. This personal computer 1 is used as a mininote type personal computer, and is fundamentally constituted by the indicator 3 whose opening and closing are enabled to the main part 2 and the main part 2. The appearance perspective view and drawing 2 in which the state where drawing 1 opened the indicator 3 of the personal computer 1 to the main part 2 is shown, The front view and drawing 6 of the right side figure and drawing 5 in which the state where the left side face figure and drawing 4 in which the state where the top view and drawing 3

blockaded the indicator 3 to the main part 2 is shown opened the indicator 3 180 degrees to the main part 2 is shown are the bottom view.

[0023]The stick type pointing device 5 operated when moving the keyboard 4 operated when inputting various kinds of characters, signs, etc., and a mouse cursor to the main part 2 is formed in the upper surface. The shutter button 10 operated when picturizing with the loudspeaker 8-1 which outputs a sound and 8-2, and the CCD video camera 23 provided in the indicator 3 is further formed in the upper surface of the main part 2.

[0024]The indicator 3 is combined with the main part 2 by the hinge 9-1 and 9-2, enabling free opening and closing. It is equipped with the battery 7 between the hinge 9-1 of the main part 2, and the hinge 9-2, enabling free attachment and detachment.

[0025]As the pawl 13-1 and 13-2 are provided in the indicator 3 and it is shown in drawing 3, In the state where the indicator 3 was blockaded to the main part 2, the pore 6-1 into which the pawl 13-1 and each of 13-2 fit, and 6-2 are provided in the main part 2 in the position which counters the pawl 13-1 and 13-2 (drawing 2).

[0026]The microphone 24 is attached next to the image pick-up part 22. This microphone 24 is made as [collect / the sound from the back], as shown also in drawing 6.

[0027]As shown in drawing 3, the exhaust hole 11 is formed in the left lateral of the main part 2, and as shown in drawing 5, the suction hole 14 is formed in the front lower part of the main part 2 at it. The slot 12 for inserting the card (PC card) based on the standard which PCMCIA (Personal Computer Memory Card InternationalAssociation) specifies is established next to the exhaust hole 11.

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[0030]Next, the composition inside the personal computer 1 is explained with reference to drawing 7.

[0031]The central processing unit (CPU (Central Processing Unit)) 51 comprises a Pentium (Pentium: trademark) processor made from Intel (Intel) (trade name), etc., and is connected to the host bus 52, for example. Further, the bridge 53 (what is called a north bridge) is connected to the host bus 52, and the bridge 53, It has AGP(Accelerated Graphics Port) 50 and is connected to the PCI (Peripheral ComponentInterconnect/Interface) bus 56.

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[0033]The bridge 53 is further connected also with the cache memory 55. The cache memory 55 comprises a memory which can perform operation of writing or read-out at a high speed more as compared with RAM, such as SRAM (Static RAM), 54, and carries out cash of the program or data which CPU51 uses (it memorizes temporarily).

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[0035]RAM54 comprises a DRAM (Dynamic RAM) and memorizes data required for the program which CPU51 executes, or operation of CPU51, for example. [when starting specifically completed RAM54, for example], The electronic mail program 54A, the auto pilot program 54B which were loaded from HDD67, Operating program (OS) Application program 54 F1 thru/or 54Fn of 54C, the shaker program 54D, the capture program 54E, and others are memorized.
[0036]The electronic mail program 54A is a program which delivers and receives correspondence (what is called an e-mail) via communication lines, such as the telephone line 76, via the modem 75. The electronic mail program 54A has a received mail acquisition function. Processing which will be acquired if this received mail acquisition function checks whether the mail addressed to a user has received a message and the mail addressed to a user is in that mail box 79 to the mail server 78 which Internet Service Provider 77 has is performed.
[0037]The auto pilot program 54B is a program which starts two or more processings (or program) which were set up beforehand one by one, and processes them in the order set up beforehand.
[0038]OS(Operating System)54C, For example, what is called Windows (Windows)95 (trademark) or Windows 98 (trademark) of Microsoft Corp. (trade name), Or it is a program which is represented by what is called MacOS (trademark) of Apple Computer (trade name), etc. and which controls fundamental operation of a computer.
[0039]The shaker program 54D is a program which performs automatic-formatting processing. The capture program 54E is a program which controls incorporation of the image pick by the CCD video camera 23.
[0040]The video controller 57 is connected to the bridge 53 via AGP50, and the data (image data or text data) supplied from CPU51 via AGP50 and the bridge 53 is received, The data which generated the image data corresponding to the received data, or was received is memorized as it is to the video memory (not shown) to build in. The video controller 57 displays on LCD21 of the indicator 3 the picture corresponding to the image data memorized by video memory. The video controller 57 supplies the video data supplied from the CCD video camera 23 to RAM54 via PCI bus 56.
[0041]The sound controller 64 is connected to PCI bus 56. The sound controller 64 incorporates the signal corresponding to a sound from the microphone 24, generates the data corresponding to a sound, and outputs it to RAM54. The sound controller 64 drives the loudspeaker 8 and makes a sound output to the loudspeaker 8.
[0042]The modem 75 is connected to PCI bus 56. The modem 75 receives predetermined data from the communication network 80 or the mail server 78 while transmitting predetermined data to the communication network 80 or the mail servers 78, such as the Internet, via the dial-up line 76 and Internet Service Provider 77.
[0043]The PC Card slot interface 111, It is connected to PCI bus 56, and while supplying the data supplied from the interface card 112 with which the slot 12 was equipped to CPU51 or RAM54, the data supplied from CPU51 is outputted to the interface card 112. The drive 113 is connected to PCI bus 56 via the PC Card slot interface 111 and the interface card 112.
[0044]The drive 113 reads the data currently recorded on the magnetic disk 121 with which it is equipped if needed, the optical disc 122, the magneto-optical disc 123, or the semiconductor memory 124, The read data is supplied to RAM54 via the interface card 112, the PC Card slot interface 111, and PCI bus 56.
[0045]The bridge 58 (what is called a south bridge) is also connected to PCI bus 56. The bridge 58 comprises PIIX4E made from Intel (trademark), etc., for example, An IDE (Integrated Drive Electronics) controller / configuration registers 59, the timer circuit 60, IDE interface 61, and the USB interface 68 grade are built in. The device by which the bridge 58 is connected to the IDE bus 62, Or control etc. of the device connected via the ISA/EIO (Industry Standard Architecture /Extended Input Output) bus 63 or the I/O interface 69, Various kinds of I/O (Input /Output) is controlled.
[0046]An IDE controller / configuration registers 59, It comprises so-called two IDE controllers of a

primary IDE controller and a secondary IDE controller, the configuration registers (configuration register), etc. (neither is illustrated).
[0047]HDD67 is connected to the primary IDE controller via the IDE bus 62. When other IDE buses are equipped with what is called IDE devices, such as a CD-ROM drive which is not illustrated or HDD, the IDE device with which it was equipped is electrically connected to a secondary IDE controller.
[0048]To HDD67, the electronic mail program 67A, the auto pilot program 67B, Two or more application program 67 F1 thru/or 67Fn, etc. of the shaker program 67D, the capture program 67E, and others are recorded as OS67C and an application program. The electronic mail program 67A, the auto pilot program 67B which are recorded on HDD67, OS67C, the shaker program 67D, the capture program 67E and application program 67 F1 thru/or 67Fn, etc. are the processes of starting (boot rise) processing, are supplied to RAM54 one by one, and are loaded to it.
[0049]From the GPS antenna 106 connected via USB port 107, USB interface 68 receives a pseudonoise code and transmits the received pseudonoise code to RAM54 via PCI bus 56.
[0050]The timer circuit 60 supplies to CPU51 the data in which current time is shown corresponding to the demand from various programs via PCI bus 56.
[0051]The I/O interface 69 is further connected to the ISA/EIO bus 63. This I/O interface 69 comprises an ene BEDITTO controller, and ROM70, RAM71, and CPU72 are mutually connected in that inside.
[0052]ROM70 has memorized beforehand the IEEE1394 interface program 70A, the LED control program 70B, the touchpad input monitoring program 70C, the keystroke monitoring program 70D, the Wake rise program 70E, etc.
[0053]The IEEE1394 interface program 70A is received while transmitting the data (data stored in the packet) based on the standard specified by IEEE1394 via the IEEE1394 port 101. The LED control program 70B controls lighting of the message lamp ML or the lamp which consists of other LED power indicator PL, the cell lamp BL, and if needed. The touchpad input monitoring program 70C is a program which supervises the input from the touchpad 33 corresponding to a user's operation.
[0054]The keystroke monitoring program 70D is a program which supervises the input from the keyboard 4 or other key switches. When it is checked for the Wake rise program 70E the time set up beforehand based on the data in which the current time supplied from the timer circuit 60 of the bridge 58 is shown and the set-up time comes, In order to start predetermined processing (or program) etc., it is a program which manages the power supply of each chip which constitutes the personal computer 1.
[0055]BIOS(Basic Input/Output System (basic input/output system))70G is further written in ROM70. BIOS70G controls delivery (input and output) of data between OS or an application program, and peripheral equipment (the touchpad 33, the keyboard 4, or HDD67 grade).
[0056]RAM71 has each register or an IEEE1394I/F register for LED control, a touchpad input status, keystroke status, or setting-out time, etc. as the registers 71A thru/or 71F. For example, when the electronic mail program 54A is started, a predetermined value is stored and, as for a LED control register, lighting of the message lamp ML is controlled corresponding to the value stored. As for a keystroke status register, a predetermined operation key flag is stored. Predetermined time is set up corresponding to operation of the keyboard 4 according [a setting-out time register] to a user etc.
[0057]Via the connector to which this I/O interface 69 abbreviated the graphic display, The touchpad 33, the keyboard 4, the IEEE1394 port 101, and shutter button 10 grade are connected, the stick type pointing device 5, the touchpad 33, the keyboard 4, or the shutter button 10 -- it is alike, respectively and the signal corresponding to operation of receiving is outputted to the ISA/EIO bus 63. The I/O interface 69 controls transmission and reception of data with the apparatus connected via the IEEE1394 port 101. Power indicator PL, the cell lamp BL, the message

lamp ML, the control circuit 73, and the lamp that consists of other LED are connected to the I/O interface 69.
[0058]The control circuit 73 performs control for charge of the second battery of the built-in battery 74 or peripheral equipment while it is connected to the built-in battery 74 or the AC power and it supplies a power supply required for each block. The I/O interface 69 is supervising the electric power switch 40 operated when a power supply is one [a power supply] or turned off.
[0059]The I/O interface 69 executes the IEEE1394 interface program 70A thru/or the Wake rise program 70E also in the state of OFF of a power supply according to the power supply provided in the inside. That is, the IEEE1394 interface program 70A thru/or the Wake rise program 70E are always operating.
[0060]Drawing 8 expresses the display example of the picture displayed on LCD21, when the shaker program 54D is started. As shown in the figure, the raw material tray 201 is displayed on the upper left direction of a screen. The reading button 211 is displayed on the raw material tray 201. This reading button 211 is operated by the user, when a user tries to edit predetermined picture information and it tries to read the information made into that editing object. This operation is performed by operating the stick type pointing device 5. The raw material tray 201 is expanded and shown in drawing 9.
[0061]For example, if a user starts the capture program 54E, the video controller 57 will output the picture picturized with the CCD video camera 23 to LCD21, and will display it. Drawing 10 expresses the example of the picture which did in this way and was displayed.
[0062]When a user operates the shutter release 10 to predetermined timing, the video controller 57 supplies Still Picture Sub-Division currently then displayed on LCD21, or a video data to RAM54, and makes it memorize. This image data is supplied and recorded on the hard disk 67 from RAM54 again if needed.
[0063]The user can do in this way, can read the image data memorized by RAM54 or the hard disk 67, and can make RAM54 memorize the image data as a picture (raw material clip) of an editing object by operating the reading button 211. Thus, the image data made applicable to a shake is displayed on the raw material tray 201 as the raw material clip 212. The title of the raw material clip, distinction of an animation and Still Picture Sub-Division, and regeneration time are displayed on the right-hand side of the raw material clip 212 as expanded and shown in drawing 9. The scroll bar 213 is operated by the user, when the number of the raw material clips 212 increases, it becomes impossible to display all within the limits of the raw material tray 201 and the raw material clip 212 is scrolled.
[0064]The file which can be considered as the object (raw material clip) of edit, It can be considered as the music which has extensions, such as Still Picture Sub-Division which has extensions, such as .MOV as shown in drawing 11, the animation which has an extension called .AVI, .BMP, .GIF, .JPG, .PNG, and .PCT, or .WAV, and .AIF.
[0065]The reproduction screen 221 is displayed on the right-hand side of the raw material tray 201. If the stick type pointing device 5 is operated, a predetermined thing is specified by the user among the raw material clips 212 currently displayed on the raw material tray 201 and the reproduction button 231 is operated, the repeat display of the specified picture will be carried out to the reproduction screen 221. According to a playback position, that display position moves the playback position display button 235 to right-hand side from left-hand side as reproduction progresses at this time.
[0066]As shown also in drawing 12, the starting point can be specified with the pointer 234L, and trimming of the predetermined range of video can be carried out by specifying an end point with the pointer 234R. When trimming is carried out, let only the image data to which trimming of [of the file] was carried out be a picture of a substantial editing object.
[0067]Operation of the designated range reproduction button 232 will display only the range by which trimming was carried out by doing in this way on the reproduction screen 221. When the

rewind button 236 is operated, the display image of the reproduction screen 221 is rewound and displayed in the direction of a picture to an old new picture in time. When the fast forward button 237 is operated, the picture currently displayed on the reproduction screen 221 is fast forwarded.
[0068]If the mode button 233 is operated in the state of story reproduction mode, the mode will be changed into edit mode, and in the state of edit mode, if the mode button 233 is operated, the mode will be changed into story reproduction mode.
[0069]In edit mode, if the reproduction button 231 is operated, the raw material clip 212 then specified out of the raw material tray 201 will be displayed on the reproduction screen 221, but. In the state where story reproduction mode is set up, operation of the reproduction button 231 will reproduce the story (scenario) which is displayed on the output tray 291 and which was automatic or was edited manually from the start to the end so that it may mention later.
[0070]When a manual performs editing processing (not being automatic formatting), a user, Out of the raw material clip 212 currently displayed on the raw material tray 201, a predetermined thing is chosen and a desired scenario (story) is created by drags and drops to the arbitrary positions of two or more picture display parts 301A on the image track 301 shown in drawing 13. As for the picture (raw material clip) once dragged and dropped to the predetermined picture display part 301A, it is possible to make it move by drags and drops on the picture display part 301A of the position of further others.
[0071]The user can make the sound correspond as BGM by drags and drops the icon (raw material clip 212) of the musical file to the BGM track 302 on the output tray 291, when a musical file exists on the raw material tray 201. The length to which the music information on the BGM track 302 was assigned is equivalent to the length of the music information. Therefore, when the length of the music information is short, another music information can be assigned by drags and drops on the BGM drug 302.
[0072]The volume button 241, the color tone button 242, and the reproduction speed button 243 are displayed on the right-hand side of the reproduction screen 221. Operation of the volume button 241 will display the window 331 as shown in drawing 14 under the volume button 241. The user can adjust the volume at the time of the audio output made into the editing object by operating the adjustment bar 332.
[0073]Operation of the color tone button 242 will display the window 341 as shown in drawing 15 under the color tone button 242. In this example, the user can choose the color tone of X-rays, high contrast, remaining as it is, sepia, or the monochrome by operating the adjustment bar 342.
[0074]Operation of the reproduction speed button 243 will display the window 351 as shown in drawing 16 under the reproduction speed button 243. By operating the adjustment bar 352, the user can make reproduction speed of a picture quick, can make it late, or can adjust.
[0075]The effect display button 244 is displayed on the reproduction speed button 243 bottom. A user is drags and drops the selection button icon 364 currently displayed on drawing 17 mentioned later, or the selection button icon 362 currently displayed on drawing 18 to the effect display button 244, The effect can be assigned to the raw material currently displayed on the reproduction screen 221.
[0076]The special-effects tray 261 is displayed on the right-hand side of the volume button 241 thru/or the effect display button 244. The tag 271-1 thru/or 271-4 are displayed on this special-effects tray 261.
[0077]Selection of the tag 271-2 will display a text window, as shown in drawing 17. The picture 361 made into the editing object is displayed on this window. The font button 362 is operated when choosing the font of the text which gives an effect. The text inputted because a user operates the keyboard 4 is displayed on the text input window 363. The selection button icon 364 is operated when choosing the effect added to a text (character string). The scroll bar 365 is operated when scrolling the selection button icon 364.
[0078]A predetermined thing by drags and drops on the effect display button 244 among the

selection button icons 364. The text effect (text animation) chosen as the text input window 363 by the selection button icon 364 to the text by which it is then indicated by the input can be added. After drags and drops the selection button icon 364 to the effect display button 244, shortly after operating the reproduction button 231, the picture which added the selected text effect is displayed on the reproduction screen 221. Thus, the user can check a text effect in real time.

[0079]In the example of drawing 17, the text animation of "slanting union" is displayed on the reproduction screen 221.

[0080]Drawing 18 expresses the display example when the tag 271-3 is chosen. Selection of this tag 271-3 will display an effect window, as shown in the figure. While the picture 381 made into the editing object is displayed, the selection button icon 362 for [that] choosing an animation effect caudad is displayed on this window. The scroll bar 363 is operated when scrolling the selection button icon 362.

[0081]Also in this case, a predetermined animation effect can be chosen by drags and drops a predetermined thing on the effect display button 244 among the selection button icons 362. If the reproduction button 231 is operated after performing this selection, the picture to which the animation effect was added will be displayed on the reproduction screen 221 in real time. The animation effect of the "palpitation" is displayed in the example of drawing 18.

[0082]Drawing 19 expresses the display example when the tag 271-4 is chosen. In this case, a transition window is displayed as shown in the figure. The selection button icon 391 is displayed on this window, and the user can choose a predetermined thing as it out of two or more selection button icons 391. When this selection is performed, the typical picture corresponding to that selected transition is displayed on the indicator 393. When the scroll bar 392 is operated, the selection button icon 391 is scrolled.

[0083]A user is drags and drops it to the transition indicator 301B of the image track 301 shown in drawing 20, after selecting the predetermined selection button icon 391, Transition can be added to the picture (raw material clip) currently displayed on the picture display part 301A which adjoins before and after that.

[0084]For example, when the transition of wipe is set up, as shown in drawing 21, while the picture currently displayed on the left-hand side of the figure moves to right-hand side gradually, transition is performed as the picture currently gradually displayed on right-hand side is hidden.

[0085]Selection of the tag 271-1 will display the shaker window for automatic formatting as expanded and shown in drawing 22. The selection button 281-1 thru/or 281-5 are displayed on this shaker window. The predetermined scenario (story) supports beforehand these selection button 281-1 thru/or 281-5, respectively. The predetermined music set up beforehand, respectively supports each scenario, and the thing corresponding to the selection button 281-1 by the side of the leftmost of drawing 22 is made into what has the latest tempo, and let the music be what has it. [quickest the thing corresponding to the selection button 281-5 of most right-hand side and intense] Let music corresponding to the selection button 281-4 thru/or 281-2 between them be the music of the middle tempo, respectively.

[0086]To the selection button 281-1, specifically the Ambient music (environmental music), the selection button 281-2 — jazz music is matched with the selection button 281-4, and techno articulation comfort is matched with hip-hop music and the selection button 281-5 for the piano piece by the selection button 281-3, respectively.

[0087]Therefore, let the number of the scenes which constitute the scenario corresponding to the selection button 281-1 be comparatively few things (what has the few number of change of a scene) corresponding to such music. On the other hand, let the scenario corresponding to the selection button 281-5 be a thing (what has many number of times of change of a scene) with many the scenes. All the length of the scenario corresponding to the selection button 281-1 thru/or 281-5 is made the same, and is made into 30 seconds in this example.

[0088]The loop button 282 is operated by the user when the scenario for 30 seconds generated by

automatic formatting shall be premised on repetition reproduction being carried out. The text shake button 283 is operated by the user when shaking a text (character). If this text shake button 283 is operated, the window 284 is displayed and the user can input into this window 284 the text (character string) made into an editing object (a text shake is carried out) by operating the keyboard 4. In this example, an input indication of the three character strings, "I will do my best", "Junko", and "HAPPY", is given. [!!]

[0089]The shake button 285 is operated by the user when starting a shake (automatic formatting).

[0090]Operation of the output button 304 will display the window 401 as shown in drawing 23. A user chooses a desired item from this window 401. Thereby, the gestalt of preservation of the information (edited hand control or automatically) displayed on the output tray 291 can be chosen. When "simple preservation is carried out" of them is chosen, a file including the used picture and the compilation information of the picture are saved. This compilation information is information as shown in drawing 24, for example. In drawing 24, the frame number of most left-hand side expresses the timing from which each scene which constitutes the scenario begins. In the example of drawing 24, the scenario comprises ten scenes and it is meant that the first scene begins from the 6th frame.

[0091]The following animation effect expresses processing of the animation effect corresponding to the scene. As an animation effect, since 20 effects are prepared, the value of 0 thru/or 19 expresses the effect, and 99 of the value means that the animation effect is not applied. -1 of the value means choosing a predetermined thing at random out of 20 animation effects.

[0092]It is expressed whether the next transition is which transition among eight transition. 99 of the value means that transition is not applied. Furthermore, the following value expresses the timing of transition.

[0093]It is expressed any of the color tones whose values of 0 thru/or 23 are 24 kinds color tone effects are. -1 of the value means choosing a predetermined thing at random out of 24 kinds of color tones. 99 of the value means that the effect of a color tone is not applied.

[0094]It means whether the last value is used against the background of a black mat, and means using 1 of the value against the background of a black mat, and 0 of the value means not using it.

[0095]On the other hand, when "it saves as a usual movie" is chosen, compilation information as shown in drawing 24 is actually applied to the picture assigned to each scene, and the image data to which such an effect was given is actually generated (a rendering is carried out). [which is shown in drawing 23] Therefore, this processing takes long time compared with the case of "carrying out simple preservation." If it puts in another way, reserve time can be made into short time by choosing "simple preservation is carried out."

[0096]Next, shaker processing (automatic-formatting processing) is explained with reference to the flow chart of drawing 25 thru/or drawing 27. Especially the following processings are fundamentally performed by the shaker program 54D, unless it explains. In Step S1, reading processing is first performed considering the specified file as a raw material clip. Namely, as mentioned above, a user starts the capture program 54E, A predetermined thing is specified among the file of the image data incorporated from the CCD video camera 23, and the file of the voice data inputted from the microphone 24, and the file is specified as an object (raw material clip) of automatic-formatting processing by operating the reading button 211. When this specification processing is performed, the shaker program 54D memorizes the specified file as a raw material clip, processes the picture of the frame of the beginning of that file, and is made to display it on the raw material tray 201 as the raw material clip 212. When the specified information is speech information, the picture showing being the speech information prepared beforehand as the raw material clip 212 is displayed.

[0097]The information incorporated at this time not only in what was incorporated from the CCD video camera 23 or the microphone 24, It is also possible to have been incorporated from the Internet 80 via the interface card 112 from what was incorporated via the modem 75, the magnetic disk 121 and the optical disc 122, the magneto-optical disc 123, the semiconductor memory 124,

etc.
[0098]Next, it progresses to Step S2, and as a candidate for a shake, the shaker program 54D will perform processing which incorporates the inputted text, if the text is inputted. That is, when performing automatic-formatting processing, a user operates the tag 271-1 and displays a shaker window (drawing 22). And when performing a text shake, a user operates the text shake button 283 further. Thereby, the window 284 is displayed as shown in drawing 22. At this time, a user inputs the text which should operate the keyboard 4 and should be shaken. The shaker program 54D incorporates this text, and is made to display it on the window 284.
[0099]A user specifies the five shaker buttons 281-1 thru/or 281-5 to one. As mentioned above, the predetermined scenario supports beforehand these shaker button 281-1 thru/or 281-5, respectively, and that scenario will be chosen as it by choosing this shaker button 281. Then, in Step S3, the shaker program 54D will perform processing which memorizes it, if a predetermined thing is specified the shaker button 281-1 thru/or among 281-5.
[0100]For example, the scenario as shown in drawing 28 (A) supports the selection button 281-1. This scenario is constituted by four scenes of the scene 1 thru/or the scene 4. The scene 1 thru/or the scene 4 have the length of the time T1 thru/or T4, respectively. And in the case of this example, an animation effect is added to the scene 1 and color adjustment processing of monochrome is performed on the scene 2. And transition is added between the scene 1 and the scene 2. Furthermore, the music M1 supports this scenario.
[0101]Although the details are mentioned later, the shaker program 54D chooses a predetermined thing at random out of the picture information of the raw material clip displayed on the raw material tray 201, and performs processing assigned to the scene 1 thru/or the scene 4. As a result, editing processing in alignment with this scenario prepared beforehand will be automatically performed by the shaker program 54D.
[0102]Drawing 28 (B) expresses the scenario corresponding to the selection button 281-2. This scenario is constituted by five scenes of the scene 1 thru/or the scene 5, and the length of each scene is set to T11 thru/or T15. On the scene 2, transition is added to sepia and the scene 3 between the random effect, the scene 4, and the scene 5. And music is set to M2.
[0103]Although a graphic display is omitted, such a scenario corresponds also to the selection button 281-3 thru/or 281-5, and is prepared beforehand.
[0104]In step S4, the shaker program 54D performs processing which will be memorized if a loop is specified. That is, a user operates the loop button 282, when premised on reproducing continuously the scenario acquired by editing repeatedly. When this operation is performed, in step S4, the shaker program 54D memorizes it.
[0105]For example, the scenario corresponding to the selection button 281-1 is constituted as fundamentally shown in drawing 28 (A), but. More correctly, the scene (premised on not reproducing repeatedly continuously) in case the loop button 282 is not operated is constituted, as shown, for example in drawing 29 (A). namely, -- a scene -- one (SC1) -- the beginning -- **** -- fade-in -- carrying out -- a portion -- SC -- one -- ' -- forming -- having -- **** -- the last -- a scene -- four (SC4) -- **** -- fade-out -- carrying out -- a portion -- SC -- four -- ' -- forming -- having -- **** . Silent part M1' is formed in the last also at the music M1.
[0106]Therefore, the information edited based on the scenario constituted as shown in drawing 29 (A) comes to be shown in drawing 29 (B), when it dares to reproduce repeatedly continuously. That is, after reproduction is started by partial SC1' of fade-in and the scene 1, the scene 2, the scene 3, and the scene 4 are reproduced, the 1st reproduction is completed by partial SC4' of fade-out. And following it, reproduction of the picture of scene SC1' of fade-in is started, it is again, reproduced with the scene 1, the scene 2, the scene 3, and the scene 4, and fade-out partial SC4' is displayed again. Silent part M1' is played in the boundary part A of the 1st playback and the 2nd playback of music. Therefore, the televiewer can recognize easily that reproduction was once completed in the boundary part A.

[0107]On the other hand, when the loop button 282 is also further operated after the selection button 281-1 was chosen, a scenario as shown in drawing 29 (C) is chosen.
[0108]Although this scenario is constituted by four scenes of the scene 1 thru/or the scene 4, even if the scene 1 is reproduced after the scene 4 as for the head of the scene 1, and the last of the scene 4 -- the change -- a change on the scene 1 and the scene 2 -- or, It has change of the scene 2 and the scene 3, and composition which is not further recognized that one scenario was completed like the timing of a change of the scene 3 and the scene 4 although a scene changes. That is, it has composition which may only be recognized that the screen was changed.
[0109]Similarly, even if it plays the music M1 continuously again after playback from the head of the music M1 to a trailer, in the portion, it has composition which is not recognized that the scene was completed.
[0110]As a result, as shown in drawing 29 (D), even if the scene 1 thru/or the scene 4 are again reproduced continuously after the scene 1 thru/or the scene 4, in the boundary part A, there are few possibilities that a televiewer will recognize it as the 1st reproduction having been completed and the reproduction which is the 2nd time having been started intuitively.
[0111]Thus, the shaker program 54D has two scenarios, the scenario on condition of not being reproduced repeatedly continuously, and the scenario on condition of reproducing repeatedly continuously, corresponding to the selection button 281-1 thru/or 281-5. And when the loop button 282 is not operated, the former is chosen, and the latter is chosen when operated.
[0112]Next, in Step S5, the shaker program 54D judges whether the shake button 285 was operated, when not operated, returns to Step S1 and carries out repeat execution of the processing after it. When judged with the shake button 285 having been operated, it progresses to Step S6 and the shaker program 54D judges whether whether the loop's being specified and or not the loop button 282 were operated. When judged with the loop being specified, it progresses to Step S7 and the shaker program 54D chooses the scenario for loops corresponding to what was operated the selection button 281-1 thru/or among 281-5. On the other hand, in Step S6, when judged with the loop not being specified, in Step S8, the shaker program 54D chooses the scenario for non-loops corresponding to the thing selected the selection button 281-1 thru/or among 281-5.
[0113]Progressing to step S9 after processing of Step S7 or Step S8, the shaker program 54D assigns each of the raw material clip 212 currently displayed on the raw material tray 201 ID (identification number). And in Step S10, the shaker program 54D chooses one of raw material clips by random numbers. If it puts in another way, one raw material clip will be chosen by choosing one ID at random from ID assigned by processing of step S9.
[0114]The shaker program 54D makes the raw material clip selected by processing of Step S10 correspond to one scene (in the case of now the first scene) in the scenario selected by processing of Step S7 or Step S8 in Step S11.
[0115]In Step S12, when it is judged whether the matching processing of a raw material clip to all the scenes was completed and it has not been completed yet, it returns to Step S10 and repeat execution of the processing after it is carried out. Thus, for example, a predetermined raw material clip is matched to the scene 1 shown in drawing 28 (A), the scene 2, the scene 3, and the scene 4, respectively.
[0116]In Step S12, when judged with the matching processing to all the scenes having been completed, it progresses to Step S13 and the shaker program 54D chooses one scene. For example, a top scene is chosen here. In Step S14, it is judged whether the shaker program 54D has the length of the scene selected at Step S13 shorter than the length of the raw material clip matched with the scene. In being shorter than the length of the raw material clip with which the length of the selected scene was matched, it progresses to Step S15 and the shaker program 54D determines the portion made to correspond to the scene in a raw material clip by random numbers. For example, when the length of a raw material clip is 5 seconds and the length of a corresponding scene is 1 second, the picture of for 5 seconds and for which 1 second is made to correspond to the scene generates the

numbers from 1 to 5 by random numbers, and it is determined.
[0117]When judged with it not being shorter than the length of the raw material clip with which the length of the selected scene was matched in Step S14 on the other hand, it progresses to Step S16 and the shaker program 54D performs processing which extends the length of a raw material clip so that the length of a scene may be suited. For example, when the length of a raw material clip is 1 second and the length of a scene is 5 seconds, the length of a raw material clip and the length of a scene correspond by extending the length of a raw material clip by 5 times, i.e., carry out slow motion reproduction, (it reproduces by one the speed of 1/5 time of this).
[0118]Progressing to Step S17 after processing of Step S15 or Step S16, the shaker program 54D judges whether the effect is specified as the scene in the scenario. For example, now, when the scene made into the processing object is the scene 1 in drawing 28 (A), the animation effect is specified as this scene 1. In such a case, it progresses to Step S18 and the shaker program 54D judges whether the effect is determined or not. That is, it may be specified as the case where the effect is already determined as specification of the effect like the animation effect like the case in the scene 1 of drawing 28 (A) as a random effect, for example like the case in the scene 3 of drawing 28 (B). It has not been determined yet which effect adding an effect in the case of a random effect applies, although decided. Therefore, in such a case, it progresses to Step S19, and for example, the shaker program 54D is prepared beforehand, out of 24 effects, a random number is generated and it determines one effect.
[0119]When judged with the effect already being determined at Step S18, or when an effect is determined at Step S19, it progresses to Step S20 and the shaker program 54D makes the determined effect correspond to the raw material clip corresponding to a scene.
[0120]In Step S17, when judged with the effect not being specified as a scene, since processing of Step S18 thru/or Step S20 is unnecessary, it is omitted.
[0121]Next, in Step S21, the shaker program 54D judges whether specification of transition is made. When specification of transition has accomplished, it progresses to Step S22 and the shaker program 54D sets up transition between the following raw material clips. When the screen of the scene made into the present processing object and the scene carried out next with the processing object is changed by this, for example, for example, a wipe effect as shown in drawing 21 will be given, and a screen will be changed.
[0122]In Step S21, when judged with there being no specification of transition, since it is unnecessary, processing of Step S22 is skipped.
[0123]In Step S23, the shaker program 54D judges whether the text is incorporated or not. That is, as mentioned above, when performing a text shake, the text made into the object is incorporated in Step S2. In this case, it progresses to Step S24 and the shaker program 54D determines at random whether shake a text or not in the scene made into the processing object now. When it judges whether it was determined in Step S25 that the shaker program 54D will carry out a text shake and is judged with carrying out a text shake having been determined, one text is chosen at random from the texts followed and incorporated into Step S26. For example, as shown in drawing 22, when three texts are incorporated, it is chosen as that to which one text of them corresponds to the scene made into the processing object now.
[0124]Next, in Step S27, the shaker program 54D determines the insertion point of a text at random. In the case of this example, the insertion point of the text is set to five, the center of a screen, the upper right, the upper left, the lower left, and the lower right, and one position is determined at random from these five positions.
[0125]In Step S25, when judged with not carrying out a text shake, processing of Step S26 and Step S27 is skipped. In Step S23, when judged with the text not being incorporated, processing of Step S24 thru/or Step S27 is skipped.
[0126]Next, in Step S28, when it is judged whether the processing to all the scenes was completed and the processing to all the scenes has not been completed yet, it returns to Step S13 and the

same processing as the case where it mentions above is performed to the following scene.
[0127]In Step S28, when judged with the processing to all the scenes having been completed, it progresses to Step S29 and the shaker program 54D displays the picture corresponding to the edited scenario on the image track 301 of the output tray 291. At this time, the picture of the frame of the head of each scene is displayed on the picture display part 301A of the image track 301, and when transition exists, the picture (drawing 19) corresponding to that transition is displayed on the transition indicator 301B.
[0128]When the above processing is explained typically, it comes to be shown in drawing 30.
[0129]That is, in the case of this example, the raw material clips CL1 thru/or CL5 are specified as a raw material clip. One scenario is determined by operation of the selection button 281 specified by a user. In the case of this example, this scenario comprises n scenes of the scenes SC1 thru/or SCn. Among these, scene SC3, the color adjustment of sepia is performed, a random effect is given to scene SC_{n-1} and, as for scene SC_n, the color adjustment of sepia is performed to it. Between scene SC_{n-1} and scene SC_n, transition is formed between the scenes SC3 and SC4 between the scenes SC2 and SC3, respectively. the length of scene SC1 — as for the length of scene SC_{n-1}, the length of scene SC_n is made [the length of scene SC2 / length of scene SC3] into 3 seconds for the length of scene SC_{n-3} for 5 seconds for 1 second for 4.0 seconds for 2.2 seconds for 2 seconds. The music corresponding to this scene is also determined beforehand. These are already beforehand prepared by the shaker program 54D.
[0130]On the other hand, the shaker program 54D chooses a predetermined thing at random out of the five raw material clips CL1 thru/or CL5, and assigns it to each scene SC1 thru/or SC_n. And for example, when raw material clip CL5 is assigned to scene SC_{n-3}, 1 seconds or more of the length of raw material clip CL5 exist to the length of scene SC_{n-3} being 1 second. Then, the portion of the length for 1 second of a before [from the time t2 when the regeneration time of raw material clip CL5 was chosen at random of from t1 before t4 in this case / t3] is assigned to scene SC_{n-3}.
[0131]Thus, a user only specifies a raw material clip and can get automatically the predetermined picture information by which editing processing was carried out. Since assignment of a raw material clip is determined at random, even if it chooses the same raw material clip, a fundamentally different edit result will be obtained.
[0132]In the state where the edit result was displayed on the output tray 291, if the reproduction button 231 is operated, the shaker program 54D will display the picture corresponding to the edited scenario (what corrected the scenario prepared beforehand) on the reproduction screen 221. Thereby, the user can check an edit result.
[0133]If a user operates the output button 304 after checking in the reproduction screen 221, the window 401 as shown in drawing 23 will be displayed. The user can save the information acquired as a result of edit in the form of predetermined by choosing a predetermined item out of the item displayed on this window 401.
[0134]When "it saves as a usual movie" is chosen, the shaker program 54D actually applies compilation information to the selected raw material clip, and performs rendering processing. As a result, actually for example, the picture to which the predetermined effect was given is formed, and the storage (for example, hard disk 67) with which the picture was specified memorizes.
[0135]However, rendering processing takes comparatively long time. On the other hand, when "simple preservation is carried out" is chosen, actual rendering processing is not performed but the file and compilation information (information as shown in drawing 24) of a raw material clip selected as an editing object are saved. Therefore, compared with the case where rendering processing is carried out, it becomes possible to complete storage processing in short time.
[0136]Also in the processing shown in the flow chart of drawing 25 thru/or drawing 27, it is only

processing in which compilation information as rendering processing shown in drawing 24 rather than actually performed is created. As a result, for example, it becomes possible to edit the scenario of the length for 30 seconds in short time for about 10 seconds at most.
[0137]As shown in drawing 7, a user can be provided with the program which performs the above-mentioned processing in the state where it installed in ROM70 as the hard disk 67 and semiconductor memory as a recording medium built in the personal computer 1 beforehand.
[0138]Or again a program, To recording media, such as the magneto-optical discs 123, such as the optical discs 122, such as the magnetic disks 121, such as a floppy (registered trademark) disk, and CD-ROM (Compact Disk-Read Only Disk), and MD, and the semiconductor memory 124. It can store temporarily or permanently and can provide as a software package.
[0139]A program via the artificial satellite for the digital satellite broadcasting from a download site, It can transmit to the personal computer 1 on radio, or can transmit to the personal computer 1 with a cable via a Local Area Network and a network called the Internet, and can be made to store in the hard disk 67 etc. to build in in the personal computer 1.
[0140]The medium in this Description means the concept of a broad sense containing all these media.
[0141]In this Description, even if the processing serially performed in accordance with an order that the step which describes the program provided by a medium was indicated is not of course necessarily processed serially, it also includes a parallel target or the processing performed individually.
[0142]In this Description, a system expresses the whole device constituted by two or more devices.

[0143]
[Effect of the Invention]Since a predetermined thing is chosen among picture information and it was made to make it correspond to a scene like the above according to the information processor of this invention, an information processing method, and the program, it becomes possible promptly and simply to perform editing processing.

[Translation done.]

* NOTICES *

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2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1]It is a perspective view showing the composition of the appearance of the personal computer which applied this invention.
[Drawing 2]It is a top view showing the composition of the appearance of the personal computer which applied this invention.
[Drawing 3]It is a left side face figure showing the composition of the appearance of the personal computer which applied this invention.
[Drawing 4]It is a right side figure showing the composition of the appearance of the personal computer which applied this invention.
[Drawing 5]It is a front view showing the composition of the appearance of the personal computer which applied this invention.
[Drawing 6]It is a bottom view showing the composition of the appearance of the personal computer which applied this invention.
[Drawing 7]It is a block diagram showing the example of composition inside the personal computer of drawing 1.
[Drawing 8]It is a figure showing the display example of LCD21 of drawing 1.
[Drawing 9]It is a figure showing the display example of the portion of the raw material tray of drawing 8.
[Drawing 10]It is a figure showing the display example of the picture captured from the CCD video camera of drawing 7.
[Drawing 11]It is a figure showing the example of the graphics file incorporated into the raw material tray of drawing 8.
[Drawing 12]It is a figure showing the example of the trimming of the reproduction screen of drawing 8.
[Drawing 13]It is a figure explaining rearrangement of the clip of the output tray of drawing 8.
[Drawing 14]It is a figure showing the display example of a window when the volume button of drawing 8 is operated.
[Drawing 15]It is a figure showing the display example of a window when the color tone button of drawing 8 is operated.
[Drawing 16]It is a figure showing a display example when the reproduction speed button of drawing 8 is operated.
[Drawing 17]It is a figure showing the display example of the text window of the special-effects tray of drawing 8.
[Drawing 18]It is a figure showing the display example of the effect window of the special-effects tray of drawing 8.
[Drawing 19]It is a figure showing the display example of the transition window of the special-effects tray of drawing 8.

[Drawing 20]It is a figure showing the display example at the time of applying the transition of the output tray of drawing 8.
[Drawing 21]It is a figure showing the display example explaining a wipe effect.
[Drawing 22]It is a figure showing the display example of the shaker window of the special-effects tray of drawing 8.
[Drawing 23]It is a figure showing the display example of the window displayed when the output button of drawing 8 is operated.
[Drawing 24]It is a figure showing the example of the compilation information of simple preservation.
[Drawing 25]It is a flow chart explaining shaker processing.
[Drawing 26]It is a flow chart explaining shaker processing.
[Drawing 27]It is a flow chart explaining shaker processing.
[Drawing 28]It is a figure explaining the composition of a scene.
[Drawing 29]It is a figure explaining the composition of the scene on condition of reproducing repeatedly continuously.
[Drawing 30]It is a figure explaining shaker processing.
[Description of Notations]
1 A personal computer, 9-1, and 9-2. A hinge, and 54D and 57D A shaker program, 54E and 67E A capture program, 201 A raw material tray and 212 A raw material clip, 221 A reproduction screen and 231 reproduction buttons, 241 A volume button and a 242 color-tone button, 243 A reproduction speed button and 244 An effect display button, 261 A special-effects tray, 271-1 to 271-4. A tag, 281-1 or 281-5 selection button, and 282 [A picture display part and 301B / A transition indicator and 302 BGM track] A loop button and 283 A text shake button and 291 An output tray, 301 image tracks, and 301A

[Translation done.]

* NOTICES *

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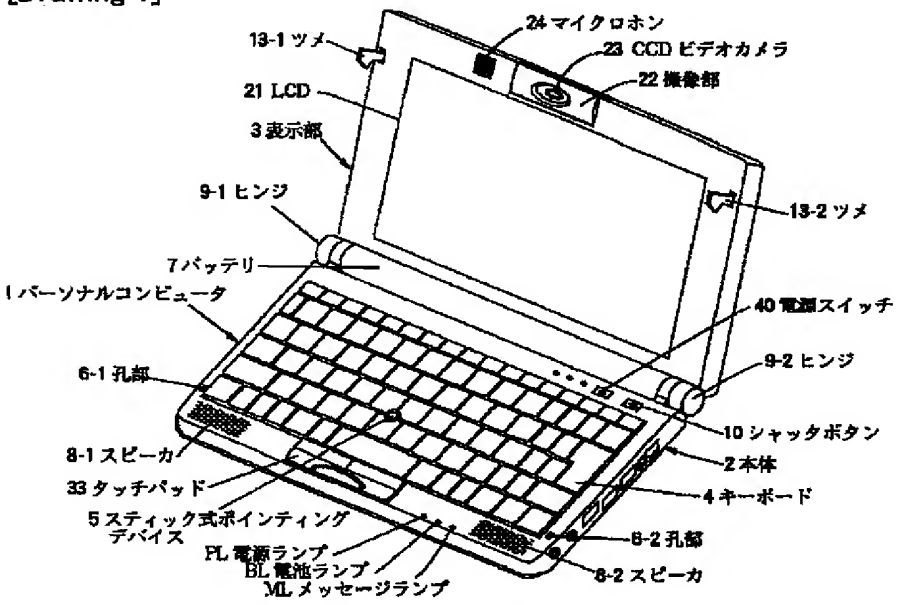
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DRAWINGS

[Drawing 1]



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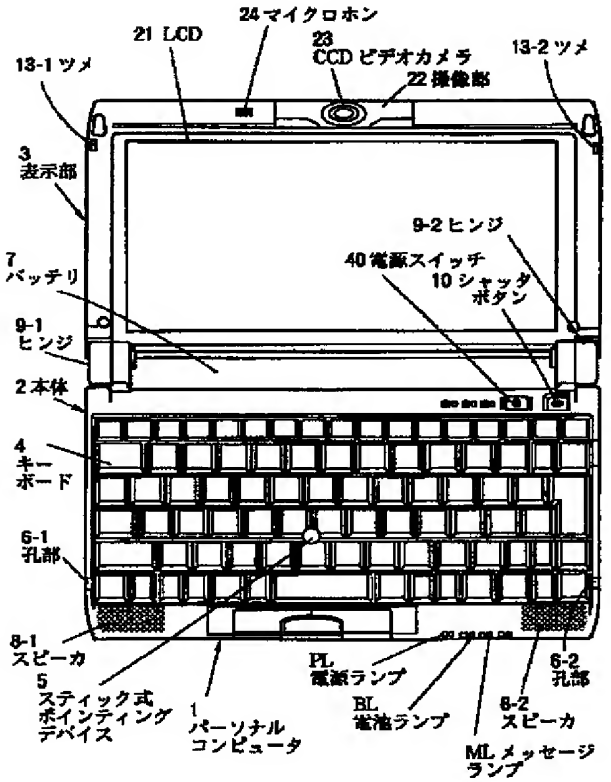
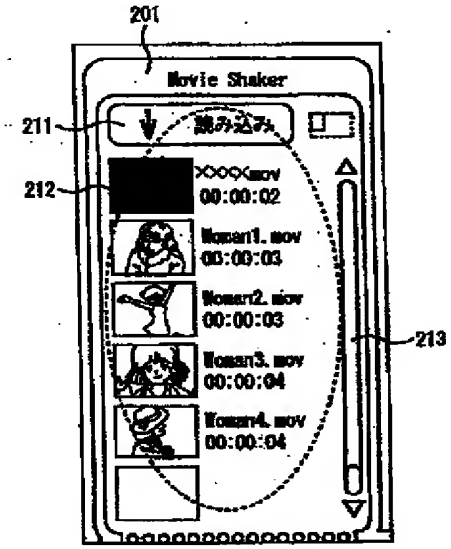
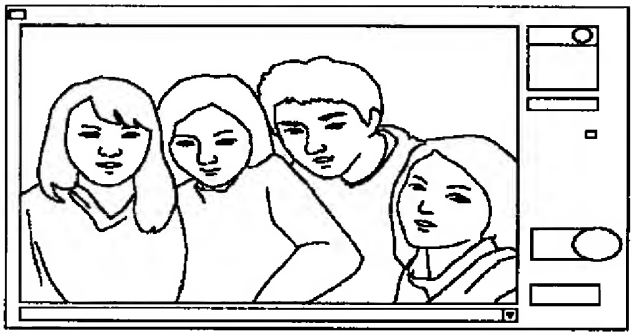




[Drawing 9]

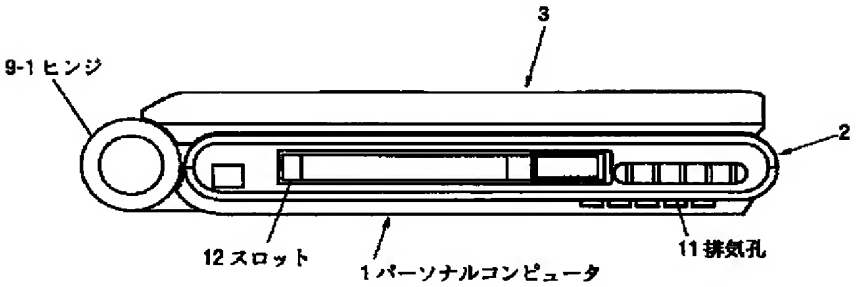
[Drawing 10]



[Drawing 11]

動画	.MOV .AVI
静止画	..BMP .GIF .JPG .PNG .PCT
音楽	.WAV .AIF

[Drawing 3]



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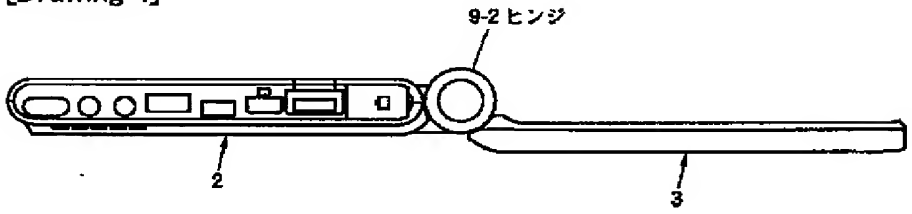

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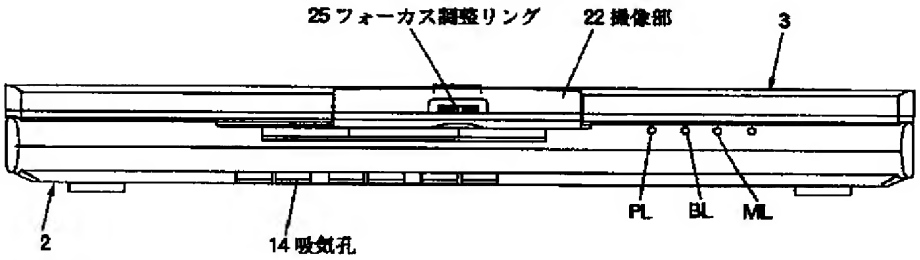

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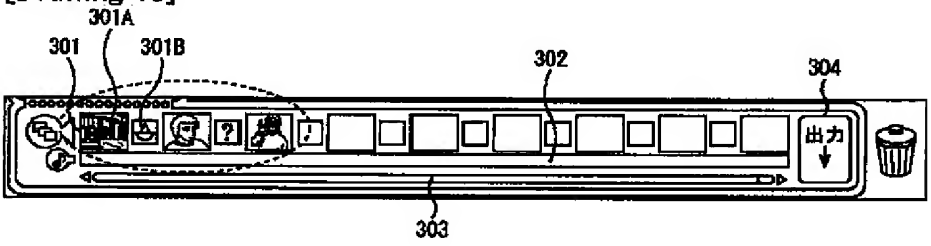
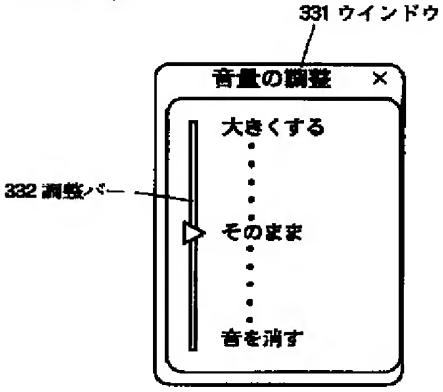


[Drawing 14]



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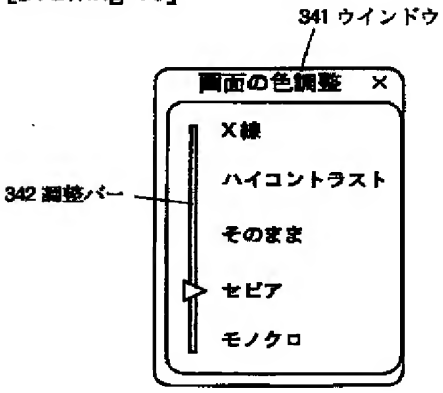

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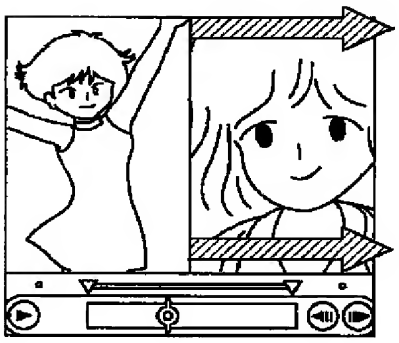
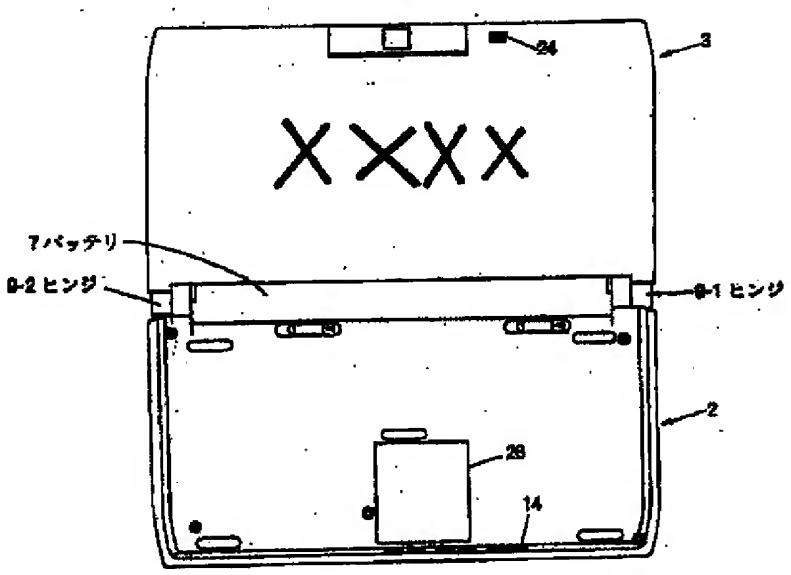
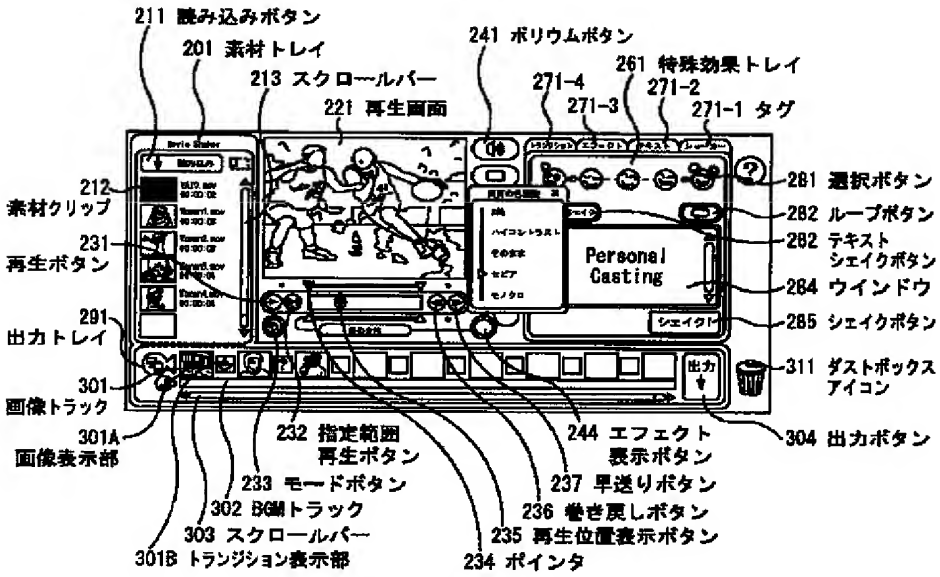


ワイプ効果

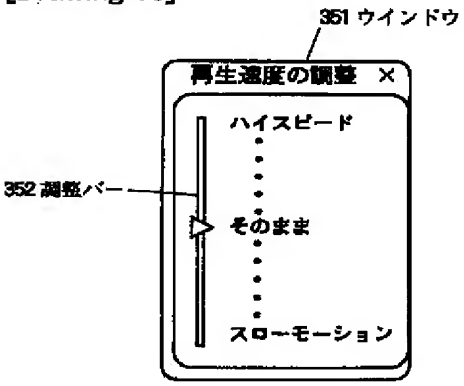


[Drawing 6]

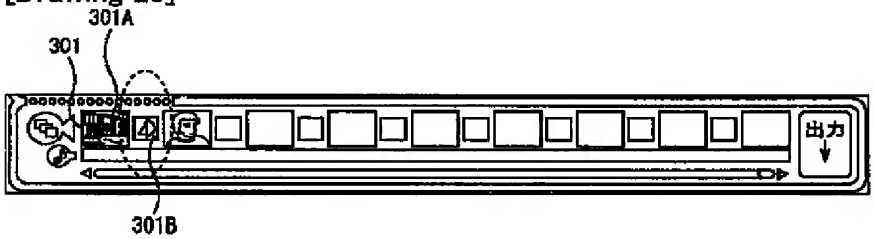
[Drawing 8]



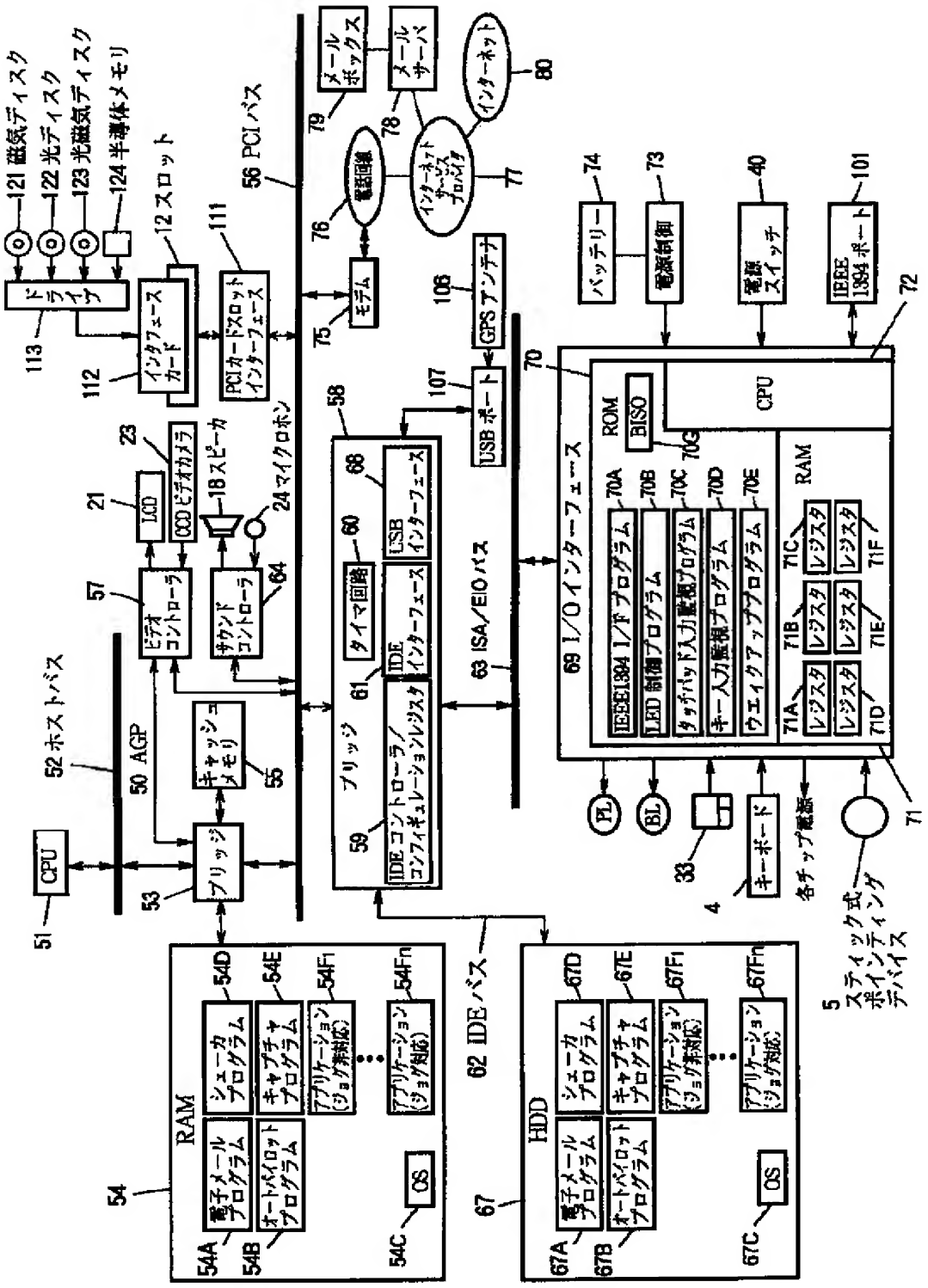
[Drawing 16]



[Drawing 20]



[Drawing 7]


121 磁気ディスク
122 光ディスク
123 光磁気ディスク
124 半導体メモリ
ドライブ
113
12 スロット
112
インタフェースカード
111
PCIカードスロットインターフェース
56 PCIバス
メールボックス
79
メールサーバ
78
インターネット
80
電話回線
76
インターネットサービスプロバイダ
77
モデム
75
106
GPSアンテナ
74
バッテリー
73
電源制御
40
電源スイッチ
101
IEEE1394ポート
72
107
USBポート
70
58
68
USBインターフェース
60
タイマ回路
61
IDEインターフェース
IDEコントローラ/コンフィギュレーションレジスタ
59
ブリッジ
63 ISA/EIOバス
69 I/Oインターフェース
ROM
BIOS
70G
CPU
70A
70B
70C
70D
70E
RAM
71C
71B
71A
71D
71E
71F
IEEE1394 I/Fプログラム
LED制御プログラム
タッチパッド入力監視プログラム
キー入力監視プログラム
ウェイクアッププログラム
レジスタ
71
PL
BL
33
4
キーボード
各チップ電源
スティック式ポインティングデバイス
5
23
LCD
CCDビデオカメラ
21
18 スピーカ
24 マイクロホン
57
ビデオコントローラ
64
サウンドコントローラ
キャッシュメモリ
55
52 ホストバス
50 AGP
CPU
51
ブリッジ
53
62 IDEバス
54
RAM
54D
54E
54F1
54Fn
シェーダプログラム
キャプチャプログラム
アプリケーション(ジョブ実施)
電子メールプログラム
オートパイロットプログラム
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HDD
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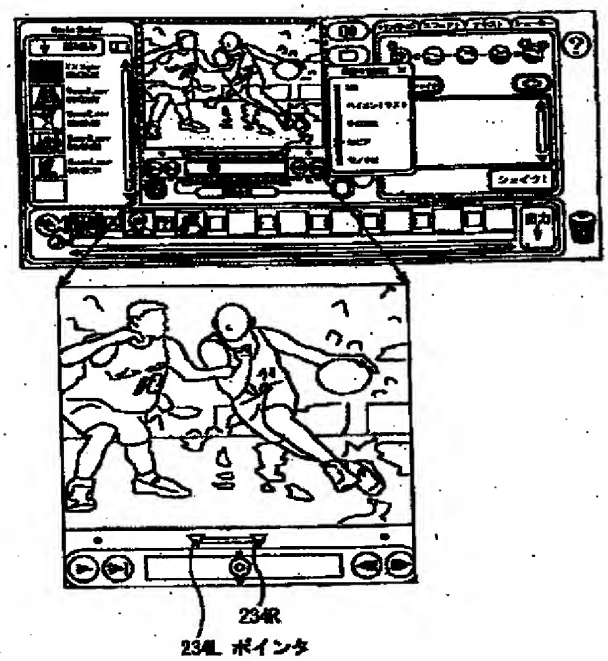
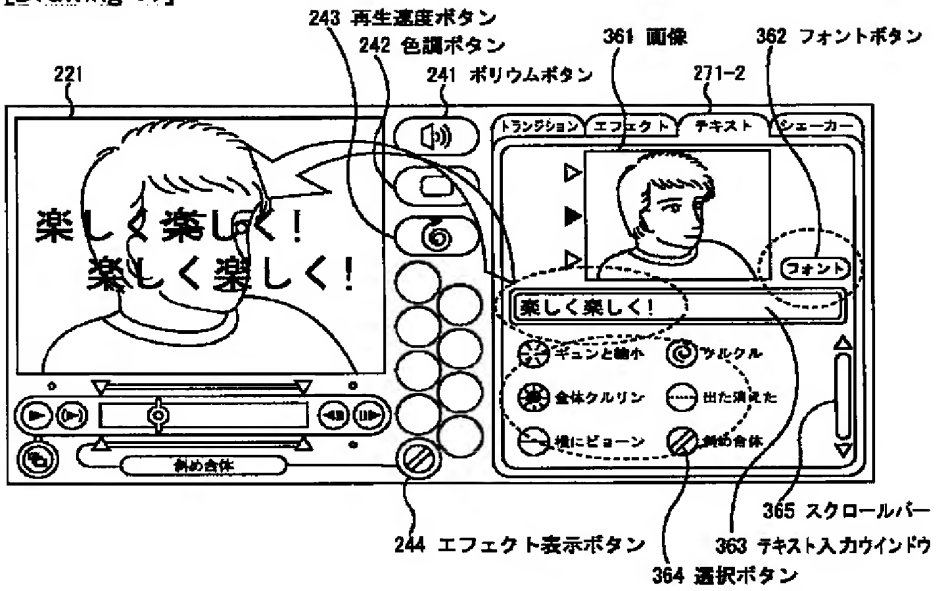
67Fn
67A
67B
67C



[Drawing 12]

[Drawing 17]



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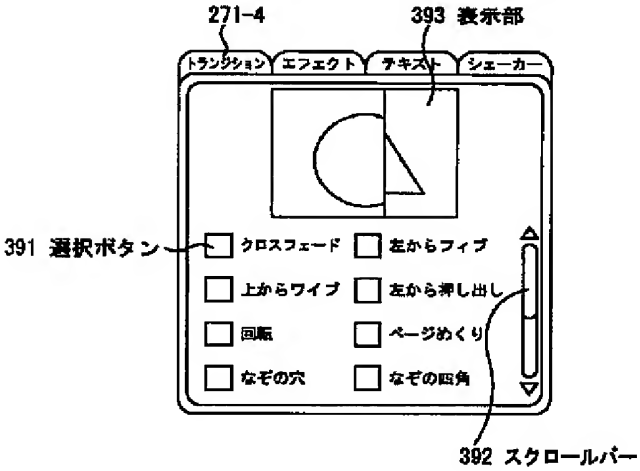

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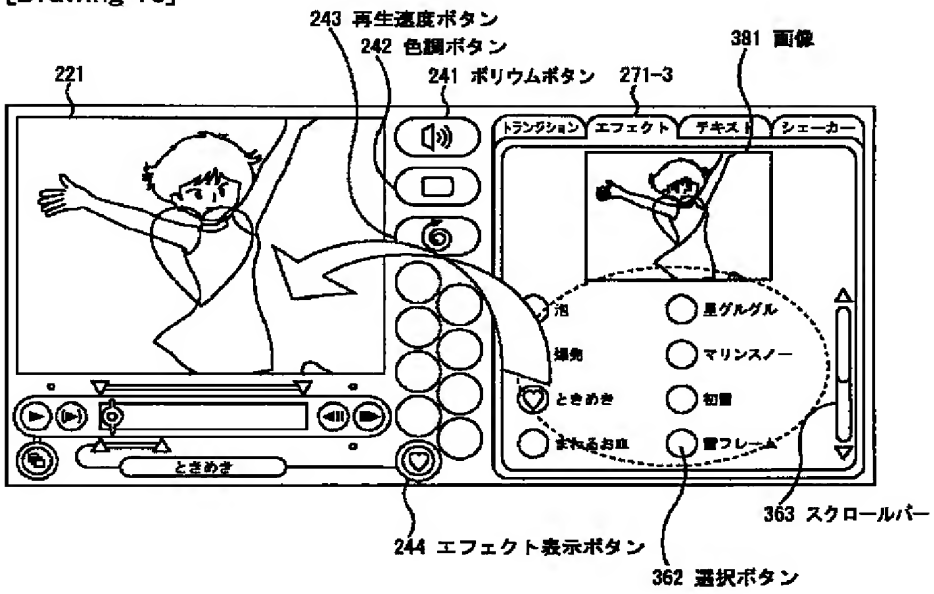

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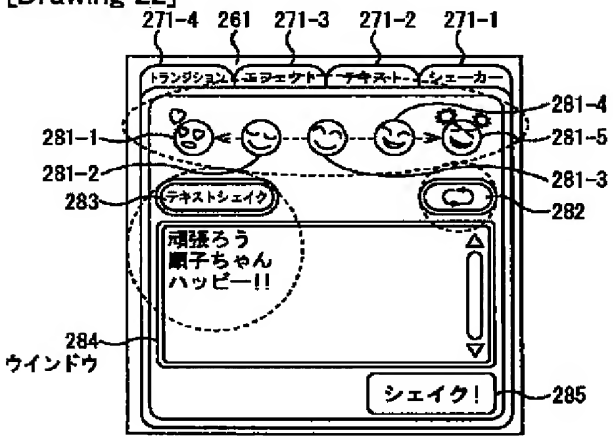

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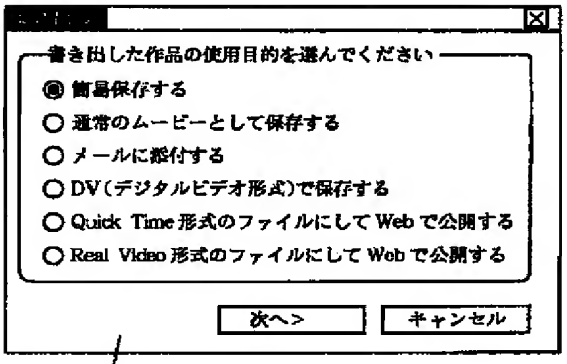
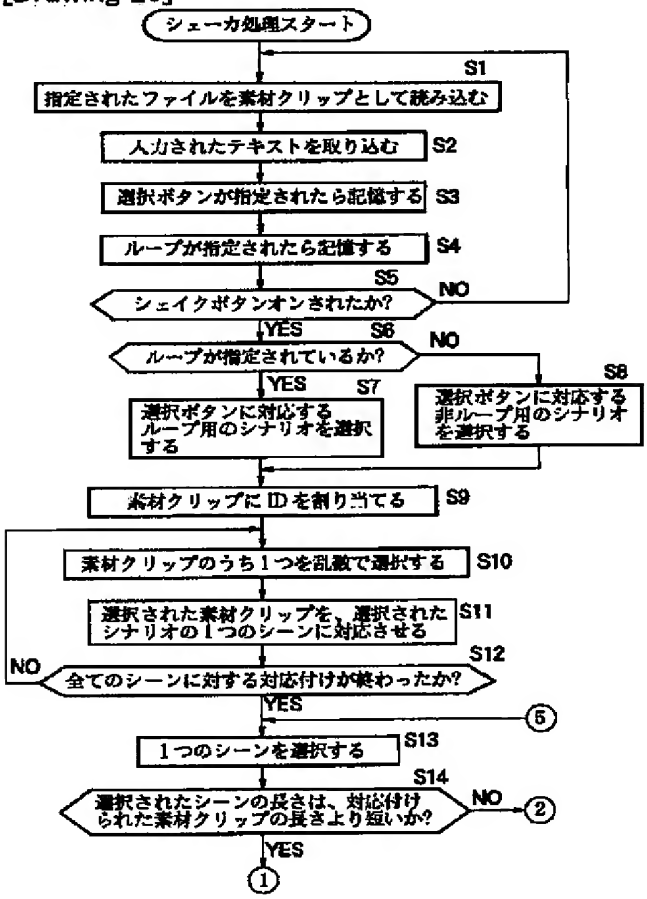


[Drawing 24]

フレーム数	アニメーションエフェクト	トランジション	トランジションタイミング	色調エフェクト	黒マット情報
00.06	99	0	0	99	1
04.09	99	0	0	21	0
07.01	99	0	0	21	0
09.28	99	0	0	21	0
15.19	99	0	0	21	0
19.27	99	0	0	21	0
24.03	99	0	0	21	0
28.09	99	0	0	21	0
33.29	99	0	0	21	0
36.12	99	99	0	99	1

[Drawing 25]



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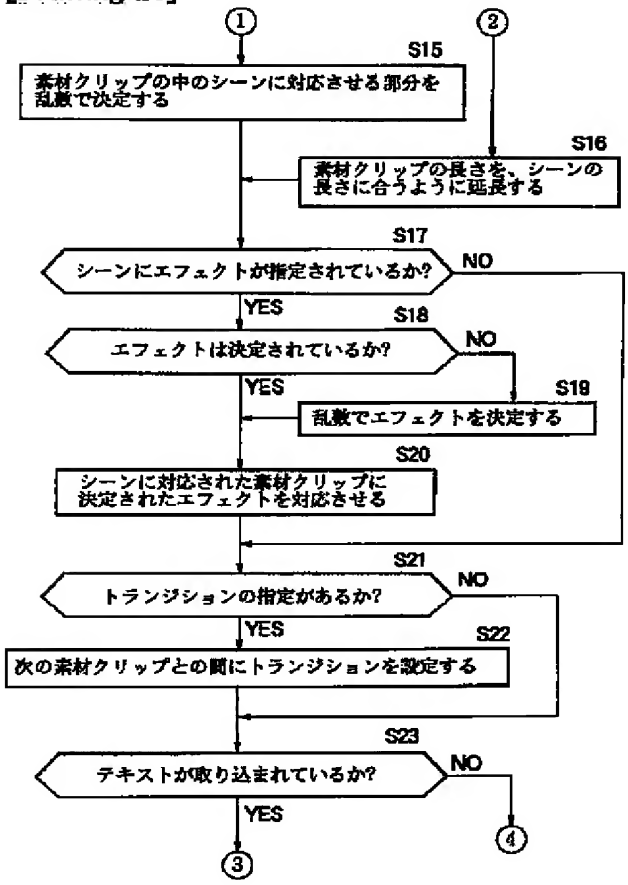
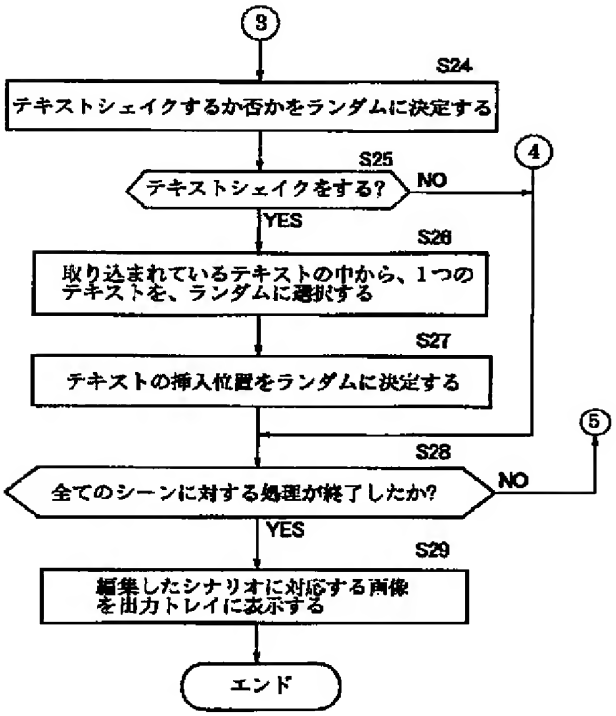
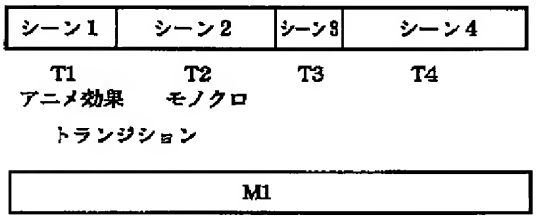


[Drawing 27]

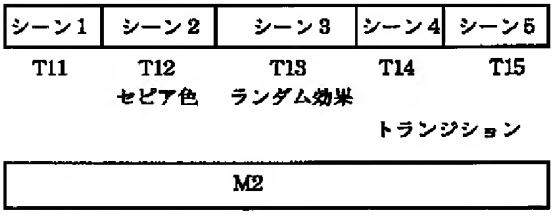


[Drawing 28]

(A)



(B)



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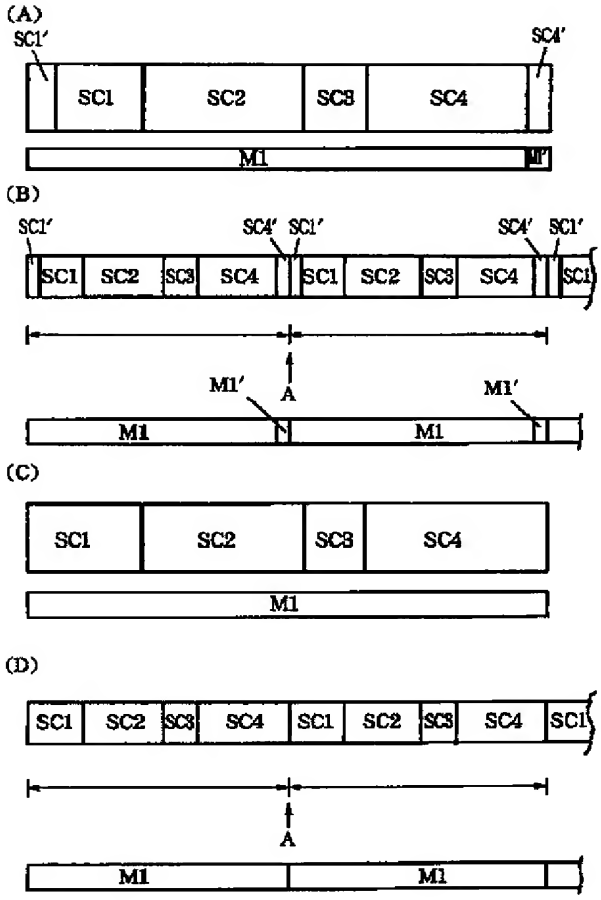

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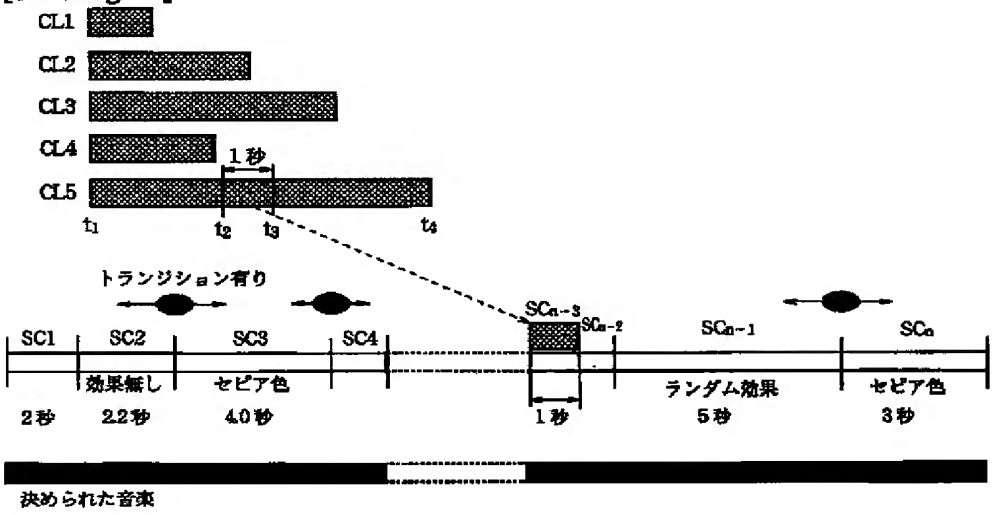

[Translation done.]